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May 25, 2007

Comments on 2008 Proposed Standards – Specifically Proposed Changes to § 151 (f) 7

These comments are submitted in advance of the upcoming Staff Workshop on June 13 & 15, 2007. The comments contained herein are also submitted on behalf of the Institute of Heating & Air Conditioning Industries.

Under the 2005 Standards, § 152 (b) of the Standards impose the requirements of § 151 (f) 7 and 10 on HVAC duct system alterations and HVAC equipment alterations. Currently § 151 (f) 7 of the Standards allows either refrigerant charge or thermostatic expansion valve (TXV) for ducted split system air conditioners or heat pumps. The proposed changes to this section would eliminate the TXV as an equivalent to refrigerant charge. This proposed change will have little or no impact on new construction. Homes that are built using the performance method can completely avoid the refrigerant charge as a compliance measure. Existing homes requiring HVAC equipment (split system) alterations will not be able to avoid the requirement for refrigerant charge.

The challenge is not the refrigerant charge level verification but the requirement for adequate airflow verification as part of the refrigerant charge test protocol. The adequate airflow verification as part of the refrigerant charge test protocol is normally conducted using the split temperature method. There have been recent questions raised about the accuracy of this test method.

Most existing HVAC duct systems probably have sufficient (but not adequate by Standards) airflow to allow reasonable occupant comfort. Most existing HVAC duct systems do not have airflow that is adequate to meet the current standard of 400 CFM/Ton (dry coil) of even the proposed standard of 350 CFM/Ton (dry coil). There is also a proposal to allow 300 CFM/Ton (dry coil) as part of the adequate airflow verification for the refrigerant charge test protocol. The last proposal may improve the chances of some existing homes to meet the adequate airflow requirement associated with refrigerant charge verification.

Currently for existing home HVAC equipment alterations, the TXV allow the HVAC contractor to use the TXV compliance to avoid additional cost to the customer that would be required to bring the duct system in compliance with current adequate airflow requirements. This will not be allowed when the 2008 Standards go into effect.

The proposal to add adequate airflow as a prescriptive requirement does include a cost effective analysis. The cost effective analysis is strictly for new construction which is based on the fact that duct system design is a mandatory measure. The cost associated with

improving adequate airflow for new construction is very low because the duct system is already probably within 90% of the adequate airflow standard.

Has a cost effective analysis been conducted to determine whether requiring adequate airflow in existing homes would also be cost effective?

One alternative is continue to allow the TXV for HVAC equipment alterations under § 152 (b) of the Standards for existing homes. The HERS rater TXV verification protocol for existing home shall include the requirement for failure for improper installation.

Respectfully Submitted,

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cc: Susie Evans, IHACI